from about 0 atomic percent to about 5 atomic percent of a metal selected from the group consisting of zirconium, hafnium, titanium, and mixtures thereof;

from about 0 atomic percent to about 5 atomic percent ruthenium; and

the balance comprising rhodium, wherein said rhodium is present in an amount of at least 24 atomic percent;

wherein said alloy of said gas turbine engine component further comprises a microstructure that is essentially free of L12 – structured phase at a temperature greater than about 1000°C.

IN THE CLAIMS

Please CANCEL claims 1-4, 9-15, and 20-34 without prejudice.

Please ADD the following new claims:

35. (New) An alloy for use in high-temperature applications, said alloy comprising:

palladium, in an amount ranging from about 1 atomic percent to about 41 atomic percent;

platinum, in an amount that is dependent upon said amount of palladium, such that

a. for said amount of palladium ranging from about 1 atomic percent to about 14 atomic percent, said platinum is present up to about an amount defined by the formula (40 + X) atomic percent, wherein X is the amount in atomic percent of said palladium, and

b. for said amount of palladium ranging from about 15 atomic percent up to about 41 atomic percent, said platinum is present in an amount up to about 54 atomic percent; and

the balance comprising rhodium, wherein said rhodium is present in an amount of at least 24 atomic percent;

wherein said alloy comprises a microstructure that is essentially free of L12 – structured phase at a temperature greater than about 1000°C.

36. (New) The alloy of claim 35, wherein said alloy further comprises a metal selected from the group consisting of zirconium, hafnium, titanium, and mixtures thereof.

37. (New) The alloy of claim 35, wherein said alloy comprises from about 0 atomic percent to about 5 atomic percent of a metal selected from the group consisting of zirconium, hafnium, titanium, and mixtures thereof.

38. (New) The alloy of claim 37, wherein said metal comprises zirconium.

39. (New) The alloy of claim 37, further comprising from about 0 atomic percent to about 5 atomic percent ruthenium.

40. (New) The alloy of claim 39, wherein:

said platinum is present up to the lesser of about 52 atomic percent and an amount defined by the formula (30+X) atomic percent, wherein X is the amount of said palladium;

said palladium is present in an amount that is dependent on the amount of said platinum, such that

a. for said amount of platinum ranging from about 0 to about 21 atomic percent, said palladium is present in an amount ranging from about 1 atomic percent to about an amount defined by the formula (15+Y) atomic percent, wherein Y is the amount in atomic percent of said platinum, and

b. for said amount of platinum ranging from about 22 atomic percent to about 52 atomic percent, said palladium is present in an amount ranging from about 1 atomic percent to about 36 atomic percent; and

the balance comprising rhodium, wherein said rhodium is present in an amount ranging from about 26 atomic percent to the lesser of about 95 atomic percent and about an amount defined by the formula (85+2Y) atomic percent, wherein Y is the amount in atomic percent of said platinum.

41. (New) The alloy of claim 40, said alloy comprising:

from about 21 atomic percent platinum to about 52 atomic percent platinum;

from about 22 atomic percent palladium to about 36 atomic percent palladium; and

the balance comprising rhodium, wherein said rhodium is present in an amount ranging from about 26 atomic percent rhodium to about 43 atomic percent rhodium.

42. (New) The alloy of claim 40, said alloy comprising:

from about 3 atomic percent platinum to about 29 atomic percent platinum;

from about 1 atomic percent palladium to about 6 atomic percent palladium; and

the balance comprising rhodium, wherein said rhodium is present in an amount ranging from about 70 atomic percent to the lesser of about 94 atomic percent and about an amount defined by the formula (85+2Y) atomic percent, wherein Y is the amount in atomic percent of the platinum.

43. (New) An alloy consisting essentially of:

palladium, in an amount ranging from about 1 atomic percent to about 41 atomic percent;

platinum, in an amount that is dependent upon said amount of palladium, such that

a. for said amount of palladium ranging from about 1 atomic percent to about 14 atomic percent, said platinum is present up to about an amount defined by the formula (40 + X) atomic percent, wherein X is the amount in atomic percent of said palladium, and

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b. for said amount of palladium ranging from about 15 atomic percent up to about 41 atomic percent, said platinum is present in an amount up to about 54 atomic percent;

from about 0 atomic percent to about 5 atomic percent of a metal selected from the group consisting of zirconium, hafnium, titanium, and mixtures thereof;

from about 0 atomic percent to about 5 atomic percent ruthenium; and

the balance rhodium, wherein said rhodium is present in an amount of at least 24 atomic percent;

wherein said alloy further comprises a microstructure that is essentially free of L12 – structured phase at a temperature greater than about 1000°C.

44. (New) An alloy comprising:

from about 5 atomic percent to about 40 atomic percent platinum; and

the balance comprising rhodium;

wherein said alloy further comprises a microstructure that is essentially free of L12 – structured phase at a temperature greater than about 1000°C.

45. (New) The alloy of claim 44, wherein said alloy further comprises a metal selected from the group consisting of zirconium, hafnium, titanium, and mixtures thereof.

46. (New) The alloy of claim 45, wherein said alloy comprises from about 0 atomic percent to about 5 atomic percent of a metal selected from the group consisting of zirconium, hafnium, titanium, and mixtures thereof.

47. (New) The alloy of claim 46, wherein said metal comprises zirconium.

48. (New) The alloy of claim 46, further comprising from about 0 atomic percent to about 5 atomic percent ruthenium.

49. (New) The alloy of claim 48, comprising:

from about 5 atomic percent to about 30 atomic percent platinum; and

the balance comprising rhodium.

50. (New) The alloy of claim 49, comprising:

from about 5 atomic percent to about 10 atomic percent platinum; and

the balance comprising rhodium.

51. (New) An alloy consisting essentially of:

from about 5 atomic percent to about 40 atomic percent platinum;

from about 0 atomic percent to about 5 atomic percent of a metal selected from the group consisting of zirconium, hafnium, titanium, and mixtures thereof;

from about 0 atomic percent to about 5 atomic percent ruthenium; and

the balance rhodium;

wherein said alloy comprises a microstructure that is essentially free of L12 – structured phase at a temperature greater than about 1000°C.

52. (New) A gas turbine engine component comprising an alloy, said alloy comprising:

palladium, in an amount ranging from about 1 atomic percent to about 41 atomic percent;

platinum, in an amount that is dependent upon said amount of palladium, such that

a. for said amount of palladium ranging from about 1 atomic percent to about 14 atomic percent, said platinum is present up to about an amount defined by the formula (40 + X) atomic percent, wherein X is the amount in atomic percent of said palladium, and

b. for said amount of palladium ranging from about 15 atomic percent up to about 41 atomic percent, said platinum is present in an amount up to about 54 atomic percent;

from about 0 atomic percent to about 5 atomic percent of a metal selected from the group consisting of zirconium, hafnium, titanium, and mixtures thereof;

from about 0 atomic percent to about 5 atomic percent ruthenium; and

the balance comprising rhodium, wherein said rhodium is present in an amount of at least 24 atomic percent;

wherein said alloy of said gas turbine engine component further comprises a microstructure that is essentially free of L12 – structured phase at a temperature greater than about 1000°C.

53. (New) The turbine engine component of claim 52, wherein said gas turbine engine component is a blade of an aircraft engine, a vane of an aircraft engine, a bucket of a power generation turbine engine, or a nozzle of a power generation turbine.

54. (New) The turbine engine component of claim 53, wherein said gas turbine engine component comprises an airfoil, and wherein said airfoil comprises said alloy.

55. (New) The turbine engine component of claim 54, wherein said airfoil comprises a tip section, a leading edge section, and a trailing edge section, and wherein at least one of said tip section, said leading edge section, and said trailing edge section comprises said alloy.

56. (New) A turbine engine airfoil comprising an alloy, said alloy comprising:

from about 21 atomic percent to about 52 atomic percent platinum;

from about 22 atomic percent to about 36 atomic percent palladium; and

the balance comprising rhodium, wherein said rhodium is present in an amount ranging from about 26 atomic percent to about 43 atomic percent rhodium;

wherein said alloy of said turbine engine airfoil comprises a microstructure that is essentially free of L12 – structured phase at a temperature greater than about 1000°C.

57. (New) A turbine engine airfoil comprising an alloy, said alloy comprising:

from about 5 atomic percent to about 30 atomic percent platinum;

from about 1 atomic percent to about 6 atomic percent palladium; and

the balance comprising rhodium, wherein said rhodium is present in an amount ranging from about 70 atomic percent to the lesser of about 94 atomic percent and about an amount defined by the formula (85+2Y) atomic percent, wherein Y is the amount in atomic percent of the platinum;

wherein said alloy of said turbine engine airfoil comprises a microstructure that is essentially free of L12 – structured phase at a temperature greater than about 1000°C.

58. (New) A turbine engine airfoil comprising an alloy, said alloy comprising:

from about 5 atomic percent to about 40 atomic percent platinum;

from about 0 atomic percent to about 5 atomic percent of a metal selected from the group consisting of zirconium, hafnium, titanium, and mixtures thereof;

from about 0 atomic percent to about 5 atomic percent ruthenium; and

the balance comprising rhodium;

wherein said alloy of said turbine engine airfoil comprises a microstructure that is essentially free of L12 – structured phase at a temperature greater than about 1000°C.